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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,620	03/23/2004	William James Scales	GB920020094US1	2626
29683	7590	05/11/2006	EXAMINER	
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212			PORTKA, GARY J	
			ART UNIT	PAPER NUMBER
			2188	

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/806,620

Applicant(s)

SCALES ET AL.

Examiner

Gary J. Portka

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-28 is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>23 Mar 2004</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-28 are presented for examination. Although the Examiner at first notified Applicant's representative that the claims should be restricted into two groups, upon further review it has been decided that the claims are not restrictable.

#### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on March 23, 2004 was considered by the examiner.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Surugucchi et al., US 6,687,765 B2, in view of the admitted prior art, or alternatively over Surugucchi in view of Carlson et al., US 2003/0135609 A1.

6. As to claims 1 and 6, Surugucchi discloses an apparatus having memory and method of operating with a RAID controller comprising determining an optimum I/O configuration by testing performance characteristics of a plurality of I/O operations that write a block of data to the RAID controller (see Abstract, Figs. 1-3, col. 4 lines 17-44

and line 54 to col. 5 line 1, col. 6 line 66 to col. 7 line 6, and col. 8 lines 3-22), wherein the configuration includes data length and alignment (see in particular claim 15, col. 10).

7. Surugucchi does not disclose that the RAID controller is virtualized. However, it is admitted as prior art that it is desirable to virtualize a RAID system (and thus the controller) to ensure the interoperability of devices of a Storage Area Network without requiring details of the implementation of the storage devices (see paragraph of page 5-6). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to virtualize the RAID controller, because this would allow its configuration optimizing method to be used for a RAID in a Storage Area Network without requiring the other network entities to be aware of its details.

8. Alternatively, Carlson describes a SAN in which configuration of an analogous RAID may be modified. The RAID is virtualized since the SAN may operate any number of device types (see pg. 1 [0004]) and yet the disclosure motivates to reduce the details required by the administrator in configuring the system (see pg. 1 [0012], [0013], and [0018]). This virtualization is implemented using programs such as disclosed (see pg. 3 [0045], [0048], and pg. 5 [0058]). The configuration modification may be implemented on RAID systems (see pg. 14 [0132]). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to virtualize the RAID controller, because this would allow its configuration optimizing method to be used for a RAID in a Storage Area Network without requiring the other network entities to be aware of its details.

9. As to claims 2 and 8, Surugucchi includes a cache (133, Fig. 2).

10. As to claims 3, 4, 9 and 10, Surugucchi does not teach input/output buffers, but such buffers were notoriously well known and commonly used in systems such as shown in Figs. 1 and 2 and described at col. 5 line 51 to col. 2 line 33, in order to provide storage for streaming data at different speed inputs and outputs. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use input/output buffers, because these were well known to be used when streaming data at different input and output speed capabilities.

11. As to claims 5 and 11, Surugucchi includes the characteristic of response time (see col. 7 lines 16-19).

12. As to claim 7, Surugucchi carries out the method when otherwise idle, as Fig. 3 depicts (idle when not running normal I/O operation).

13. As to claim 12, the method and apparatus of Surugucchi as described hereinabove inherently contains a computer program product performing the method, as recited.

***Allowable Subject Matter***

14. Claims 13-28 are allowed.

***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent No:

6,629,158 Configuration of a RAID controller.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571) 272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gary J Portka  
Primary Examiner  
Art Unit 2188

May 9, 2006



**GARY PORTKA**  
**PRIMARY EXAMINER**